

NEW RADIO COMPASS GUIDES SHIPS AT SEA

Invention Enables Vessels to Determine Their Position by Means of Wireless

DEvised BY NAVY MEN HERE

A new job for wireless—guidance of ships at sea?

By the aid of that mysterious force which spans oceans and girdles continents, ship captains are coming safe to port through storm and fog.

The day is in sight when, through this same medium of wireless, a ship may be brought clear across the Atlantic without sight of sun or stars, on a straight course as any land with compass and sextant.

Wireless has been made to take the place of compass. The magnetic compass was the first great invention in the realm of physics which gave aid to the navigator. Now comes the "radio compass," in many ways more wonderful than its more familiar namesake.

This is "Navy Day." For the first time since the United States entered the war the Philadelphia Navy Yard was thrown open to visitors on payment of a small admission fee, which is to be used for naval relief.

It is especially fitting that the story of the radio compass should be made public today for the first time, because it was at the Philadelphia Navy Yard that the experiments were made which gave the radio compass to the world.

This new instrument of navigation is one of the few gifts made by the war to the human race. Experiments began two years ago. They had progressed sufficiently far during the war that this country was in the war for the radio compass to be of material use to the United States Navy.

By the time the armistice was signed the compass had been brought to a high state of efficiency.

When our troops of the Twenty-eighth Division began to come home, the radio compass, installed in stations along the coast near the mouth of Delaware Bay, helped bring them in safe through all kinds of weather.

The radio compass is now an assured success, an acknowledged contributor to navigation and science. It requires no fuel, no electricity, no batteries, and sends out a high scientific signal through the ether. For all time it will be a factor in the safety of ships at sea.

And it was worked out right here in Philadelphia. The wireless room at League Island, one of the most interesting sights shown to navy yard visitors today, saw the early attempts to establish the principle on which the compass is based.

Behind locked doors, in the drafting room at League Island, the plans and specifications for the first completed compass were drawn by a few technical experts sworn to secrecy.

Details Veiled in Mystery

The radio compass has been one of the most carefully guarded naval secrets of the war. To this day, it is regarded as "highly confidential," and details of its mechanical principles may not be revealed at this time.

It is a little difficult to make clear the workings of the compass without violating this confidence. Another name for the device is "direction finder." This term may help make clear the manner in which the compass works.

In a word, the compass is an instrument which, in the hands of an expert, determines exactly the direction whence a radio impulse comes. Another name for the device is "direction finder." This term may help make clear the manner in which the compass works.

But how does this information help a navigator establish his exact position in storm or fog, when guiding stars are hidden, when drift and cross-currents have thrown him out on his "dead reckoning," when he cannot see the guiding beam of light-ship or hear the muffled bell of channel buoy?

It is all perfectly simple. If the navigator knows the direction of his ship from several points on shore, he easily can "find himself" on his navigation charts.

Stations Constructed

Therefore the Navy Department has built stations at various points along the coast and equipped them with radio direction finders. For instance in the Fourth Naval District, in which Philadelphia is included, there are three stations guarding the entrance to Delaware Bay.

One is at Cape May, the main station. The others are across the bay at Cape Henlopen, and at Bethany Beach, both in Delaware.

Imagine the captain of a troopship making in for the Delaware Breakwater. He has gone through a succession of storms, and with a big ship and several thousand soldiers entrusted to his care, he is not quite as certain as he would like concerning his exact position.

He thinks he is somewhere off the Delaware Capes, but does not know. Fog, a driving rain, and a following sea add to his danger and perplexity.

He turns to his wireless. A call for Cape May sputters from his microphone. It is answered. He asks for his bearings. He is ordered to repeat his code letter and his request. Then, out of the ether, in but a short time, comes the information that he is, say, at an angle of 95 degrees from Cape May, of 82 degrees from Cape Henlopen, and of 63 degrees from Bethany Beach.

The rest is easy. His chart lies spread before him in the chartroom. With a square and dividers he draws lines at the indicated degrees from the

three bearings he has been given. He has three bearings plainly marked on his chart. Where the three lines come together, there is his ship.

At the angles named, he will find he is forty-seven miles from Bethany Beach. If he chooses, he may ask bearings time after time as he approaches the difficult entrance to the Capes, and pilot his course as he goes. The information he gets will be astonishingly accurate. It may vary a trifle.

The lines he draws from the three angles given him may not always come together in a sharp point, he may find that they make a little triangle as they cross each other, because there is always the chance of slight error. But for practical purposes his position will be as sure as if he had reckoned it under ideal conditions with his ship's instruments.

On the land side the navigator's problem is worked out by navy operators through the close co-operation of the three shore stations. All three have radio compasses. At all three the call for position is picked up simultaneously and the angle of incidence of the call noted on the direction indicator.

Bethany Beach sends its data by telegraph to Cape Henlopen. Henlopen operates a low-tuned radio which will not "interfere" with the high-powered navy sets, and sends its own data and that of Bethany Beach station to Cape May.

Later there will be a submarine cable to replace the low-tuned radio in carrying this information across the mouth of the bay. Cape May, with its high-powered sending radio, wirelesses the data of the three stations to the ship at sea.

Later is the present development of the radio compass. Later—when the world's shipping has been equipped with radio direction finders—it will be a simple matter for a captain at sea to determine his position anywhere, no matter how badly he may have lost his way in storm or fog.

He simply will "listen in" on the calls sent out by the world's great wireless stations—Napan, in Germany; the Eiffel Tower, in France; or on this side of the ocean, Arlington, Annapolis or Sable Island. Laying down on his chart the angles from which these calls come, he can determine his whereabouts instantly.

CHINESE SAVED FROM MOB

Patrolman Rescued by Hurling Iron at

An unruly crowd attacked the store of Joseph Choo, a Chinese landladyman, at 17 West Susquehanna avenue, last night and threatened to lynch him after Choo had hit an intruder standing in the head with a baton.

Patrolman Evans, of the Fourth and York streets station, fought his way through the crowd into the store and threw a brick at the first man who tried to enter. Several men who remained calm, got the prisoner into the street where he was bundled into a passing automobile. James Quinn, 2314 North Fifth street, the man struck by the baton, was taken to the Episcopal Hospital.

PRAYER HEALER VISITS CITY

London Divine to Be Guest of Doctor

Mockridge White Here James Moore Hickson, of London, who believes the methods used by healers of the apostolic days can be revived, will visit this city today. He will be the guest of the Rev. Dr. John Mockridge, pastor of St. James' Protestant Episcopal Church, Twenty-second and Walnut streets.

Mr. Hickson for the last month has been conducting a mission of healing in Trinity Chapel, New York. For eight years he has been preaching his gospel in England, and came to this country the first week in April.

HOW RADIO COMPASS WORKS

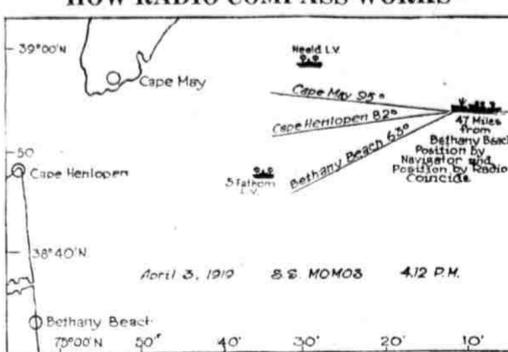


Diagram shows method of finding ships at sea by new navy compass stations on shore. Stations are located at Cape May, Cape Henlopen and Bethany Beach for Delaware bay navigation

WHERE ARE WITS OF OLD IN PHILA. DINNER CLUBS?

Staid Old Organizations Perpetuate Best Traditions of Good Fellowship of Forebears—Entertain Distinguished Guests

Where are the wisdom and the wit of yesterday? Lang a pessimistic poet who had just finished a long and a cup of coffee in a Chestnut street cafeteria.

Are the wholesome waggeries, the nimble-witted stories, the quick retort, the sparkling satire which used to scintillate winter nights about tavern tables that cracked under the burden of stonking platters and tankards of nut-brown ale forever gone?

And all the dining clubs of Philadelphia rise up and cry out as if with one voice, a long, lingering, emphatic "No."

The Clover Club, the Five O'Clock Club, the Lincoln, the Terrapin, the New England, the New Jersey and others, like the clubs of the Sir Rogers in early England and like the dining clubs of colonial America, eat "by virtue of the unfained law of relations, not only to satiate stomachs, but to increase friendship and love."

Probably the most widely known of the dining clubs of the city is the Clover Club, whose motto is "While we live we live in clover; when we die we die all over." Former Governor William M. Barr, who has presided over the dinners of the club for the last thirty-seven years, tells a story which illustrates how widely known is the Clover Club.

"I was over in England in 1908," he said, "when the English fed the Olympic athletes. I was one of the speakers. When I was introduced as a governor the announcement was met in silence. But when the toastmaster announced I was 'resident of the Clover Club' the great body rose to its feet and cheered."

Grows From Newspaper Club

The Clover Club grew out of the old Thursday Club, an organization of newspapermen, in 1882. Colonel Alexander M. McClure was the first president. The insignia of the organization is a gridiron with cross utility pens, and the purpose "for social enjoyment, the cultivation of literary tastes and the encouragement of hospitable intercourse."

Many are the tales told of the famous old feasts of the table and of the merry flowing bowl. Bill Nye, the merry andrew historian, went to one of the dinners in 1888, and afterward wrote: "The only way to speak successfully at a Clover Club dinner, I believe, is to avoid saying what you were about to say."

James M. Beck, Joseph R. Grundy, Murdoch Kendrick, Francis Shunk Brown, William W. Porter, Martin G. Brumbaugh, Edward T. Stotesbury, Dinner: Beaker, Chauncey Tower, John Grubel, J. Howell Cummings and William I. Schaffer.

Terrapin Club Formed in 18th Century Members of the Manufacturers' Club are eligible for membership in another dining club of the city called the Terrapin Club. Dr. S. Weir Mitchell made his last public appearance at the first re-juvenation meeting of this club in 1901. The club originally dates back to the eighteenth century when the powdered topees were as necessary as hats are now.

The Terrapins entertain one or more distinguished guests a year at a dinner in the Manufacturers' Club. The officers are: President, Frank B. McClain; vice president, Colonel Henry Douglas Hughes; secretary, Elmer P. Weisel; chairman of the dinner committee, M. P. Quinn. Among the members are: Cyrus H. K. Curtis, John Gribbel, Samuel M. Vauclain, John J. Raskob, Alva C. Dinkey and J. H. Cummings.

Approximately 300 Members

The officers of the society are: President, Cyrus H. K. Curtis; vice presidents, Lincoln K. Passmore, Arthur W. Sewall; treasurer, George Irving Merrill; secretary, Edward W. Mumford; chairman, the Rev. Dr. J. P. W. Tomkins; physician, Dr. Samuel D. Risley. Among approximately three hundred members are: Morris I. Clothier, Effingham B. Morris, James M. Beck, the Rev. Dr. Russell H. Conwell, Dr. Cheesman A. Herrick, Alva B. Johnson, Charlesque Tower.

To commemorate the life and character of Lincoln is one of the purposes of the Lincoln Club, a Philadelphia dining club, which was founded in 1890 in the Colonnade Hotel by James H. Eckerley. The creed of the club is Lincoln's Gettysburg Address, and its members, according to the statement which always appears on the menus, "strive to imitate Lincoln's Americanism, and to keep alive his unselfish spirit."

The club is the outgrowth of the Young Men's Republican Committee of twenty-five years ago. The symposiums of the club are occasions for the truest of the reason and the flow of the soul. The Lincoln does not believe in the saturnalia of interruption which aims to put every speaker hors de combat. However, their dinners do not lack spiritfulness of satire and wit.

The Lincoln board is never without the officers of the Lincoln Club are: President, Josiah Marvel; vice president, John H. Mason; secretary-treasurer, Howard Benton Lewis. Among the members are: Congressman Moore, Albert E. Kennedy, William I. Schaffer, Governor Sprout, Judge Robert von

Double Wedding to Take Place in Synagogue Tomorrow

Miss Rae Borowsky and Miss Tillie Borowsky, daughters of Mr. and Mrs. Simon Borowsky, of 507 Tasker street, will figure in a double wedding which will take place tomorrow evening at the B'nai Abraham Synagogue, Sixth and Lombard streets.

William Rothman, son of Mr. and Mrs. Abraham Rothman, of 583 Carman street, Camden, will be married to Miss Rae Borowsky. Samuel Sterling, of Ninth and Porter streets, will be married to her sister, Rabbi Bernard Levinthal will perform the ceremony.

SISTERS TO MARRY

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I TEDESCHI HANNO FIRMATO LA PACE

La Storica Cerimonia di Versailles Ratifica l'atto di Morte Della Potenza Teutonica

Published and Distributed Under

Authorised by the act of October 6, 1917 on file at the Postoffice of Philadelphia.

By order of the President, A. S. BURLESON, Postmaster General.

Versailles, 28 giugno.—I Plenipotenziari della Germania hanno firmato il trattato di pace alle ore 3:12 pom. di oggi.

Copenhagen, 27 giugno.—Comunisti italiani, germanici ed austriaci hanno tenuto una conferenza nel Tirolo meridionale, alcuni giorni or sono, allo scopo di preparare i piani per una rivoluzione in Italia, secondo un dispatto giunto da Vienna.

La rivoluzione sarebbe stata fissata per la meta' del mese di luglio prossimo.

Versailles, 28 giugno.—Il trattato di pace con la Germania sara' firmato alle ore 3 pom. di oggi, nella storica sala degli Specchi, i Marescialli ed i Generali delle Armate Alleate prenderanno posto nei primi banchi assegnati agli invitati privilegiati per la cerimonia.

Le autorità francesi hanno preso provvedimenti per mantenere segreta l'ora dell'arrivo dei plenipotenziari ed ufficiali tedeschi, e cio' allo scopo di

evitare che possano ripetersi incidenti da parte del pubblico. Le credenziali dei delegati germanici saranno esaminate presto questa mattina. Il Dott. Hermann Mueller ed il Dott. Johannes Bell, plenipotenziari germanici, sono arrivati in Versailles la scorsa sera.

Roma, 26 giugno (ritardato). — Il Presidente, i vice-presidenti ed i segretari della Camera dei Deputati hanno, oggi, rassegnate le loro dimissioni.

La parte piu' impressionante del discorso pronunciato dall'On. Tittoni, Ministro per gli Affari Esteri, innanzi al Senato del Regno e' quella che riguarda l'attacco fatto agli Alleati per aver permesso che Smirne fosse occupata dai Greci, mentre essi si dividevano le colonie tedesche.

L'On. Tittoni fu specialmente amaro contro la Francia che accuso' di essersi opposta verso l'Inghilterra alle concessioni che desiderava di fare in favore dell'Italia.

L'On. Tittoni disse: "Se gli Alleati dovessero persistere ad ignorare le aspirazioni degli italiani, sara' impossibile per l'Italia di demobilizzare l'Esercito, e sanare le ferite economiche e finanziarie."

Now that the Peace Treaty is off our minds, we all are ready to tackle those business promotion problems that have been neglected.

HERBERT M. MORRIS Advertising Agency Every Phase of Sales Promotion 400 Chestnut Street Philadelphia

The reliance that womenkind has learned to put in crackers is being well illustrated at the tea being given for returning soldiers and sailors.

Every woman in the room has in her pantry a generous supply of the National Biscuit Company's always useful and universally accepted Graham Crackers.

Nettie, a comely young woman, yeoman of the Navy, still in uniform, found herself unexpectedly entertaining a company at her uptown home the other day.

She had invited a business man, the woman after a shopping trip, or the child home from a hard day at school, nothing is more sustaining than N.B.C. Graham Crackers. Their nut-like flavor is more enticing, even, than the old fashioned kind.

NATIONAL BISCUIT COMPANY

GRAHAM CRACKERS



The Adirondacks

There's magic in the word "Adirondacks." It's the spirit of our pioneer ancestors calling us back to Nature. It's the urge of the trails through the woods, by the lakes, over the hills. It's the dip of the paddle, the song of the reed, the scent of the pine. It's forgetfulness of work and worry; it's sport and fun. It's freedom.

Of course, you're going to take a vacation this summer! Go to the Adirondacks, this beautiful territory of the Indians is truly a playground paradise—natural, unspoiled, refreshing. Other attractive resorts are:

Saratoga Springs, Lake George, Lake Champlain, The Thousand Islands, Niagara Falls, Catskill Mountains

Any number of camps, fine resort hotels, or boarding houses, and accommodations to fit every purse. All kinds of sports, fine golf and tennis. Your vacation days in this section will make you keen and fit for the work to come.

The United States Railroad Administration invites you to travel, and offers Summer Excursion fares. Ask your local ticket agent to help you plan your trip or apply to nearest Consolidated Ticket Office, or write the nearest Travel Bureau, stating booklet desired.

UNITED STATES RAILROAD ADMINISTRATION

Travel Bureau 143 Broadway New York City

Travel Bureau 645 Transportation Building Chicago

Travel Bureau 607 Huxley Building Atlanta



THOS. SAVILL'S SONS

110 WALLACE STREET

No splash or drift. No sink. Complete with their own outfit. No splash or drift. No sink. Complete with their own outfit.

Advertisement for Ramezes Cigarettes. Text: "Nobody ever changes from RAMESES CIGARETTES Nobody!"

Large advertisement for Mennen's Korakonia. Text: "Do You Chafe? Skin rubbed raw by friction—painful to walk—distressing to sit still and impossible to sleep. Dust on healing Korakonia. Relief is immediate. The flesh heals quickly. Because Korakonia stays where it's put. Resists moisture. Perspiration doesn't readily wash it away. Korakonia relieves, protects and heals. It is antiseptic and lubricating. Amazingly effective for sunburn, blisters and all severe skin irritations—and a boon to baby in the tortures of diaper rash or teething rash. At All Druggists A Big Box for 50c" Includes image of a product box.